

In general, the claims have been amended to reflect that the present invention is directed to a system of managing remote objects rather than to a system for invoking behaviors of remote objects. Some kinds of Java Beans, for example, generally include methods for remote invocation. However, the manipulation of features of the beans was typically allowed only within the same virtual machine upon which the bean existed. The present invention provides methods for representing and manipulating these features so that the bean can be programmatically altered and configured remotely, rather than being constrained to manipulation by a tool executing on the same virtual machine as the bean itself. In contrast, the Hill et al reference is directed exclusively to remote implementation of an object by creating a proxy for the object in a client, then coupling messages between the proxy and the object itself. These features taught by Hill et al. are generally not at issue in the present invention. Similarly, CORBA generally involves the remote invocation of objects, not the remote management of objects. Both of these references appear to assume that the target object will be created, edited, and otherwise managed from the same machine in which a builder tool exists, an assumption that the present invention does not adhere to.

Claim 1, as amended, calls for generating a client object forming a representation of the target object. As noted in the specification, this representation may be a list including the name of the target object, or other properties of the target object which identify features of the target object which can be manipulated. Claim 1 also calls for the client object to implement methods which support remote manipulation of said features. The specification points out that such methods include methods to get, set, create, delete, add object and remove object. These methods do not invoke the features of the object directly, but manipulate how they will behave when the object is invoked. Similarly, claim 7 calls for a remote access support mechanism including a network adapter that is responsive to remote access request from a client machine. Here, remote access requests are intended to encompass requests that attempt to manipulate the object, rather than invoke the object's behaviors. Claims 15 and 17 call for target objects that are

responsive to remote access requests to access and modify the target object via a framework. At least these features of the present invention are not shown or suggested in the relied on references.

Hill et al., alone or in combination with the CORBA reference, do not suggest any means for or need to modify a target object. For at least this reason, independent claims 1, 7, 15, 17 and new claim 18 are allowable over the relied on references, as are the claims that depend from them.

B. Conclusion

In view of all of the above claims 1-18 are believed to be allowable and the case in condition for allowance which action is respectfully requested. The references that were cited and not relied upon are believed to be no more pertinent than those references that were relied upon.

A fee of \$84.00 for the addition of an independent claim is believed to be required by this response as determined on the accompanying transmittal letter. Should any other fee be required, please charge Deposit 50-1123. Should any extension of time be required please consider this a petition therefore and charge the required fee to Deposit Account 50-1123.

Respectfully submitted,

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Version with marking to show changes:

1(Amended). A method of [accessing] managing from a client station a target object at a remote station via a telecommunications network, said method comprising the steps of:

(a) generating a client object forming a representation of said target object, which client object is configured to identify [methods] features of said target object which can be manipulated [are accessible remotely] and to implement [said remotely accessible] methods which support remote manipulation of said features;

(b) registering said target object and a network adaptor for a network protocol with a framework at said remote station;

(c) associating said client object with a network adaptor for said network protocol at said client machine; and

(d) enabling a client application to access said [target object] methods which support remote manipulation by instantiating said client object.

2(Amended). The method of Claim 1, wherein step (a) comprises compiling a target object and generating a client object comprising a target object interface identifying [which] methods of said target object that [are accessible] support manipulation remotely and a target object stub implementing said [remotely accessible] methods that support manipulation.

7(Amended). A remote access support mechanism at a client station for accessing a target object at a remote station via a telecommunications network, said remote access support mechanism comprising:

a client object forming a representation of said target object, which client object identifies methods of said target object which are accessible remotely and implements management methods for accessing said remotely accessible methods; and

a network adaptor responsive to said client object, wherein said client object is configured to be instantiated by a client application for enabling said client application to access and modify said target object.

15(Amended). A remote access support mechanism at a first machine permitting remote access and modification from a client machine to a target object at [said] a first machine via a telecommunications network, said remote access support mechanism comprising:

- at least one target object;

- at least one network adaptor supporting a network protocol;

- said at least one target object and said at least one network adaptor being registerable with a framework at said first machine and said network adaptor being responsive to remote access requests from said client machine in accordance with said protocol to access and modify said target object via said framework.

17(Amended). A remote access support mechanism on a data carrier for a computer for permitting remote access and modification from a client machine to a target object at [said] a first machine via a telecommunications network, said remote access support mechanism comprising:

- at least one target object;

- at least one network adaptor supporting a network protocol;

- said at least one target object and said at least one network adaptor being registerable with a framework at said first machine and said network adaptor being responsive to remote access requests from said client machine in accordance with said protocol to access and modify said target object via said framework.

18(New). A method of managing from a first virtual machine a target object at a second virtual machine where the target object includes features that can be manipulated programmatically by processes in the second virtual machine, the method comprising:

registering the target object and a network adaptor for a network protocol with a framework at the second virtual machine;

generating a client object on the first virtual machine forming a representation of the target object, which client object is configured to identify features of the target object that can be manipulated programmatically by processes in the second virtual machine;

associating said client object with the network adaptor for the network protocol at the first virtual machine; and

enabling a client application to manage the target object by instantiating the client object.